

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method performed by a computer system, the method comprising:

receiving a retrieving, by a processor associated with the computer system, a first plurality of first uniform resource locator (URL) locators (URLs), where one or more URLs of the first plurality of URLs include a parameter string comprising at least one parameter and a value associated with the at least one parameter;

selecting, by a processor associated with the computer system, one or more parameters present in parameter strings of the first [[URL]] plurality of URLs;

selecting, by a processor associated with the computer system, a first URL from the retrieved first plurality of URLs, where the first URL includes the selected one or more parameters;

generating, by a processor associated with the computer system, a second plurality of different URLs having different parameter combinations of the one or more selected parameters;

retrieving, by a processor associated with the computer system, content using the first URL;

retrieving, by a processor associated with the computer system, content using the second plurality of different URLs;

comparing, by a processor ~~[[of]]~~ associated with the computer system, the content retrieved using the first URL to the content retrieved using the second plurality of different URLs;

identifying, based on the comparing, one of the parameter combinations, that, when present in a particular URL, results in retrieving content that is approximately the same as the content corresponding to the first URL, the identifying being performed by ~~[[the]]~~ a processor associated with the computer system; and

generating, by ~~[[the]]~~ a processor associated with the computer system, one or more URL rewrite rules based on the identified one of the parameter combinations.

2. (Currently amended) The method of claim 1, where the ~~different parameter combinations include~~ second plurality of different URLs includes the first URL with no parameters, the first URL with ~~each of the one or more parameters individually~~ one parameter of the one or more parameters, and the first URL with ~~combinations~~ two or more of the one or more parameters.

3. (Currently amended) The method of claim 1, further comprising:
performing the ~~receiving~~ selecting a first URL, ~~the selecting one or more parameters present in the first URL~~, the generating a second plurality of different URLs, the retrieving content using the first URL, the retrieving content using the plurality of URLs, the comparing the content, and the identifying one of the parameter combinations, for multiple different first URLs of the first plurality of URLs, each first URL including the one or more parameters; and

generating the one or more URL rewrite rules for the identified one of the parameter combinations for each of the first URLs.

4. (Previously presented) The method of claim 3, where the rewrite rules specify that parameters that do not occur in a threshold number of the identified one of the parameter combinations are to be removed.

5. (Previously presented) The method of claim 1, where each rewrite rule applies to a particular web site or web host.

6. (Previously presented) The method of claim 1, where the identified one of the parameter combinations includes a minimum number of parameters with respect other ones of the parameter combinations.

7. (Currently amended) A method, performed by a computer system, for converting a uniform resource locator (URL) into a canonical form of the URL, the method comprising:

receiving a URL that refers to content and that includes a parameter [[set]] string including ~~at least one parameter~~ one or more parameters and values associated with the one or more parameters;

selecting, by a processor of the computer system, a rewrite rule by receiving a plurality of URLs that ~~include the~~ each includes a particular parameter [[set]] string, where the particular parameter string includes a combination of the one or more

parameters selected from the parameter string included in the received URL, and

identifying parameters of the one or more parameters in the parameter-set that do not result in retrieving substantially different content, when present in a URL;

applying, by ~~[[the]]~~ a processor of the computer system, the rewrite rule to the URL by removing the parameters that do not contribute to content from the URL; and

outputting the rewritten URL as the canonical form of the URL.

8. (Canceled)

9. (Currently amended) The method of claim 7, where the identifying parameters of the one or more parameters in the parameter-set includes:

retrieving first content corresponding to a ~~sampled~~ first URL including a first combination of parameters ~~in the parameter-set~~;

retrieving second content corresponding to a second URL including a second combination of parameters, where the first combination of parameters includes at least one parameter not included in the second combination of parameters; and

identifying the first content as substantially the same as the second content combination of parameters as corresponding to retrieved content, where the retrieved content is approximately the same as another retrieved content corresponding to another combination of parameters that includes a reduced number of parameters.

10. (Currently amended) The method of claim 9, where the second combination of parameters includes at least one of the ~~sampled~~ URL with no parameters, the ~~sampled~~

~~URL with individual parameters, or the sampled URL with combinations of the at least one parameter~~ an individual parameter of the first parameter combination, or a combination of two or more parameters of the first parameter combination.

11. (Previously presented) The method of claim 7, where the rewrite rule applies to a particular web site or web host.

12. (Currently amended) One or more devices comprising:
at least one fetch bot to download content on a network from locations specified by uniform resource locators (URLs);

a content manager ~~configured~~ to extract URLs from the downloaded content;

a rewrite component to

receive a URL that refers to content and that includes a parameter `[[set]]` string including at least one parameter and a value associated with the at least one parameter,

apply a predetermined rewrite rule to the URL that removes the at least one parameter from the URL when the at least one parameter does not affect the content referred to by the URL, where the predetermined rewrite rule is determined by receiving a plurality of URLs that include `[[the]]` parameter `[[set]]` strings comprising combinations of parameters and comprising at least one parameter and a value associated with the at least one parameter, and identifying parameters in the parameter `[[set]]` strings that do not result in retrieving substantially different content, when present in a URL; and

output the rewritten URL as the canonical form of the URL; and

a URL manager ~~configured~~ to store the canonical form of the URL.

13. (Canceled)

14. (Currently amended) The one or more devices of claim 12, where the identifying parameters in the parameter ~~[[set]]~~ strings includes:

retrieving first content corresponding to a ~~sampld~~ first URL including a first combination of parameters ~~in the parameter set~~;

retrieving second content corresponding to a second URL including a second combination of parameters, where the first combination of parameters includes at least one parameter not included in the second combination of parameters; and

identifying the first content as substantially the same as the second content combination of parameters as corresponding to retrieved content, where the retrieved content is approximately the same as another retrieved content corresponding to another combination of parameters that includes a reduced number of parameters.

15. (Currently amended) The one or more devices of claim 14, where the second combination of parameters includes ~~at least one of the sampled URL with no parameters, the sampled URL with individual parameters, or the sampled URL with combinations of the at least one parameter~~ an individual parameter of the first parameter combination, or a combination of two or more parameters of the first parameter combination.

16. (Previously presented) The one or more devices of claim 12, where each rewrite rule applies to a particular web site or web host.

17. (Currently amended) A system comprising:

one or more devices comprising:

means for receiving a first uniform resource locator (URL) including a parameter string, where the parameter string includes one or more parameters and values associated with the one or more parameters;

means for retrieving content corresponding to the first URL;

means for retrieving content corresponding to a plurality of URLs having different parameter combinations of the one or more parameters, where the one or more parameters are selected from the parameter string;

means for identifying the parameter combination from the plurality of URLs that corresponds to content that is approximately the same as the content corresponding to the first URL and that contains a minimum number of parameters compared to other parameter combinations; and

means for generating one or more URL rewrite rules based on the identified parameter combination.

18. (Currently amended) A computer-readable memory device including programming instructions executed by a processor, the programming instructions comprising:

instructions for receiving a first uniform resource locator (URL) including a parameter string, where the parameter string includes one or more parameters and values associated with the one or more parameters;

instructions for retrieving content corresponding to the first URL;

instructions for retrieving content corresponding to a plurality of URLs having different parameter combinations of the one or more parameters, where the one or more parameters are selected from the parameter string;

instructions for identifying the parameter combination from the plurality of URLs that corresponds to content that is approximately the same as the content corresponding to the first URL and that includes a minimum number of parameters; and

instructions for generating one or more URL rewrite rules based on the identified parameter combination.

19. (Currently amended) The system of claim 17, where the different parameter combination comprises combinations comprise one of the first URL with no parameters, the first URL with each of the one or more parameters individually, or the first URL with combinations of the one or more parameters an individual parameter of the one or more parameters, or a combination of two or more parameters of the one or more parameters.

20. (Previously presented) The computer-readable memory device of claim 18, where the instructions for receiving a first URL, the instructions for retrieving content corresponding to the first URL, the instructions for retrieving content corresponding to a plurality of URLs, and the instructions for identifying the parameter combination are

performed for multiple first URLs, each first URL including the one or more parameters, and where the one or more URL rewrite rules specify that parameters that do not occur in a threshold number of the identified parameter combinations are to be removed.

21. (Previously presented) The system of claim 17, further comprising:
means for determining whether the content that corresponds to the plurality of URLs is approximately the same as the content that corresponds to the first URL using a similarity hash function.

22. (Previously presented) The computer-readable memory device of claim 18, where the rewrite rules specify that parameters that do not occur in a threshold number of the identified parameter combinations are to be removed.